AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the

application:

1.   (Currently Amended) A method of processing a visual image, for identifying

areas of visual attention, comprising ~~the steps of~~:

storing an image as an array of pixels, each pixel having a value;

selecting test pixels from the array~~,~~;

for each text pixel~~,~~;

selecting one or more ~~neighbour~~neighbor groups of pixels ~~neighbouring~~neighboring the

test pixel;

selecting comparison pixels from the array;

identifying a group of pixels ~~neighbouring~~neighboring a selected comparison pixel

having the same respective positional relationships to the comparison pixel as a selected

~~neighbour~~neighbor group of pixels has to the test pixel;

comparing the values of the selected ~~neighbour~~neighbor group with the values of the

identified group in accordance with a predetermined match criterion, and

generating a measure of visual attention for each test pixel, in dependence upon the

number of comparisons made for that test pixel for which the comparison results in a mismatch.

2.   (Currently Amended) A method ~~according to~~as in claim 1 wherein, for each test

pixel, if one or more of the selected pixels ~~neighbouring~~neighboring the test pixel has a value not

substantially similar to the value of the corresponding pixel ~~neighbouring~~neighboring the

comparison pixel, an anomaly value for that test pixel is incremented, and ~~the~~this process is

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repeated using further comparison pixels with the same test pixel until a comparison pixel is

selected for which all the selected pixels have a value substantially similar to the corresponding

pixel ~~neighbouring~~neighboring the text pixel, in which case a further ~~neighbour~~neighbor group is

selected and the process repeated.

3.   (Currently Amended) A method ~~according to~~as in claim 1, wherein a plurality of

test pixels are ~~analysed~~analyzed concurrently.

4.   (Currently Amended) A method ~~according to~~as in claim 1, wherein a plurality of

comparison pixels are compared with a given test pixel concurrently.

5.   (Currently Amended) A method ~~according to~~as in claim 1, wherein the value is a

three-element vector representative of a ~~colour~~color.

6.   (Currently Amended) A method ~~according to~~as in claim 1, wherein in addition to

~~neighbour~~neighbor groups, further variable search parameters are selected.

7.   (Currently Amended) A method ~~according to~~as in claim 6, wherein the further

variable search parameters include a threshold value for the determination of whether two pixel

values are substantially similar.

8.   (Currently Amended) A method ~~according to~~as in claim 1, the method including

~~the step of~~storing values for search parameters for which a ~~high anomaly value~~large number of

mismatches has been generated, and selecting, for subsequent test pixels, the same search

parameters.

9.   (Currently Amended) A method ~~according to~~as in claim 1, wherein the principal

subject in a visual scene is identified by identification of the region containing pixels having the

~~greatest anomaly values~~largest number of mismatches.

10.   (Currently Amended) A method ~~according to~~as in claim 1, wherein a measure of

visual attention afforded to a given object in a visual scene is determined by comparison of the

anomaly values generated for the pixels representing that object with the anomaly values

generated for other parts of the scene.

11.   (Currently Amended) A method of image compression comprising:

processing an image to locate areas of visual attention using the method of ~~any one of the~~

~~preceding claims~~claim 1; and

coding the image according to the measures of visual attention such that areas of high

visual attention are coded with more accuracy than areas of the image with low visual attention.

12.   (Currently Amended) A method of image compression ~~according to~~as in claim 11

in which the measures of visual attention are used to select a level of quantization for coding the

image.

13.   (Currently Amended) Apparatus for processing a visual image, for locating areas

of visual attention, said apparatus comprising:

means for storing an image as an array of pixels, each pixel having a value;

means for selecting test pixels from the array,

means for selecting ~~neighbour~~neighbor groups of pixels ~~neighbouring~~neighboring the test

pixel;

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means for selecting comparison pixels from the array;

means for identifying that group of pixels ~~neighbouring~~neighboring a selected

comparison pixel whose pixels have the same respective positional relationships to the

comparison pixel as a selected ~~neighbour~~neighbor group of pixels has to the test pixel;

means for comparing the values of the selected ~~neighbour~~neighbor group with the values

of the identified group in accordance with a predetermined match criterion,

means for generating a measure of visual attention for each test pixel, in dependence

upon the number of comparisons which identify a non-matching group.

14.   (Previously Presented) A computer programmed to perform the method of claim

1.

15.   (Previously Presented) A computer program product directly loadable into the

internal memory of a digital computer, comprising software code portions for performing the

steps of claim 1 when said product is run on a computer.

16.   (Currently Amended) A computer program product stored on a computer usable.

medium, said product comprising:

at least one computer readable program ~~means~~configured for causing a computer to store

an image as an array of pixels, each pixel having a value;

at least one computer readable program ~~means~~configured for causing the computer to

select test pixels from the array,

at least one computer readable program ~~means~~configured for causing the computer to

select, for each test pixel, ~~neighbour~~neighbor groups of pixels ~~neighbouring~~neighboring the test

pixel;

at least one computer readable program ~~means~~configured for causing the computer to select comparison pixels from the array;

at least one computer readable program ~~means~~configured for causing the computer to identify the group of pixels ~~neighbouring~~neighboring a selected comparison pixel having the same respective positional relationships to the comparison pixel as a selected ~~neighbour~~neighbor group of pixels has to the test pixel;

at least one computer readable program ~~means~~configured for causing the computer to compare the values of the selected ~~neighbour~~neighbor group with the values of the identified group in accordance with a predetermined match ~~criterion,~~criterion; and

at least one computer readable program ~~means~~configured for causing the computer to generate a measure of visual attention for each test pixel, in dependence upon the number of comparisons in which the comparison result in a mismatch.

17.   (Currently Amended) A method of processing a sequence of visual images, for identifying areas of visual attention, said method comprising ~~the steps of~~:

storing a sequence of images as a multi dimensional array of pixels, each pixel having a value;

selecting test pixels from the ~~array;~~array;

for each test pixel, selecting one or more ~~neighbour~~neighbor groups of pixels ~~neighbouring~~neighboring the test pixel;

selecting comparison pixels from the array;

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identifying a group of pixels ~~neighbouring~~neighboring a selected comparison pixel

having the same respective positional relationships to the comparison pixel as a selected

~~neighbour~~neighbor group of pixels has to the test pixel;

comparing the values of the selected ~~neighbour~~neighbor group with the values of the

identified group in accordance with a predetermined match criterion~~.~~; and

generating a measure of visual attention for each test pixel, in dependence upon the

number of comparisons made for that test pixel for which the comparison results in a mismatch.

18.   (Currently Amended) A method of processing a moving image, for identifying

areas of visual attention, said method comprising:

storing successive pictures of the moving image as respective arrays of picture element

values;

defining a test group of picture elements comprising a first test picture element and a

second test picture element having a spatial offset and a temporal offset from the first;

defining a comparison group of picture elements comprising a first comparison picture

element having a spatial and temporal offset from the first test picture element and a second

comparison picture element having a spatial and temporal offset from the first comparison

picture element equal respectively to the spatial and temporal offset of the second test picture

element from the first test picture element;

comparing the picture element values of the first and second test picture elements with

the picture element values of the first and second comparison picture elements respectively, in

accordance with a predetermined match criterion;

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defining further such comparison groups and comparing the test ~~pictures element~~picture

elements with those of the further comparison groups;

generating a visual attention measure for the first test picture element in dependence on

the number of comparisons made for it in which the comparison results in a mismatch.

19.   (Currently Amended) A method ~~according to~~as in ~~Claim~~claim 18 further

including:

defining at least one further comparison group comprising a first further comparison

element having the same spatial offset from the first test picture element as has the first

comparison picture element, but a different temporal offset, and a second further comparison

picture element having the same offset from the first further comparison picture element as the

second test picture element has from the first test picture element, and

wherein the comparing step includes comparing values of the first and second further

comparison picture elements with the values of the first and second test picture elements

respectively.

20.   (Currently Amended) A method ~~according to~~as in ~~Claim~~claim 18 in which the

test group and ~~the or~~ each comparison group includes at least one additional picture element.

21.   (Currently Amended) A method ~~according to~~as in ~~Claim~~claim 1 further

comprising:

defining a subset of said pixel array and generating said measure of visual attention in

respect of test pixels in said subset.

22.   (Currently Amended) A method ~~according to~~as in ~~Claim~~claim 21, further

comprising:

~~the further steps of~~identifying one or more of said test pixels for which said measure is

indicative of a large number of mismatches relative to the measures generated for others of said

test pixels; and

generating said measures for further test pixels in the vicinity of said one or more

identified test pixels.

23.   (Currently Amended) A method of ~~analysing~~analyzing a pattern represented by

an ordered set of elements each having a value comprising, in respect of at least some of said

elements:

selecting a group of test elements comprising at least two elements of the ordered set;

selecting a group of comparison elements comprising at least two elements of the ordered

set, wherein the comparison group has the same number of elements as the test group and

wherein the elements of the comparison group have relative to one another the same positions in

the ordered set as have the elements of the test group;

comparing the value of each element of the test group with the value of the

correspondingly positioned element of the comparison group in accordance with a predetermined

match criterion to produce a decision that the test group matches or does not match the

comparison group;

selecting further said comparison groups and comparing them with the test group; and

generating for the test group a distinctiveness measure as a function of the number of

~~comparisons~~comparison groups for which the ~~comparison indicates a mismatch~~decision is that

the test group does not match the comparison group.

24.   (Currently Amended) A method ~~according to~~as in claim 1 further including ~~the~~

~~further step of~~:

(a)   identifying ones of said positional relationship which give rise to a number of

consecutive mismatches which exceeds a threshold;

(b)   storing a definition of each such identified relationship; and

(c)   ~~utilising~~utilizing the stored definitions for the processing of further test pixels.

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